

## Autoimmune diseases

In spite of a dearth in research and systemic data, clinical observations have always suggested that the number of auto-immune diseases have been rising rapidly over the past few decades. A large part of it was attributed to the increased awareness about these diseases in recent times, which in turn has increased their chances of getting diagnosed. However, an extensive study on more than 14,000 people, was recently conducted by Dr. Frederick Miller and team at the National Institute of Environmental Health Sciences in Durham, North Carolina, USA. Results of the study have revealed that over the past 25 years, a significant increase in the prevalence of antinuclear antibodies (ANA), which is the most commonly used biomarker for auto-immune diseases, have been found throughout the US population. These results are disconcerting, especially considering the fact that the exact etiology behind most autoimmune diseases remains unknown.

The pandemic may have worsened the situation, as studies have found out that patients infected with SARS-CoV-2 virus produce large numbers of autoantibodies. Increase in incidence of various auto-immune disorders, like Multisystem Inflammatory Syndrome (MIS-C) is being reported in infected patients.

Drastic changes in life-style, such as altered dietary habits, lack of sleep, increased psychological stress, increased environmental pollutants, etc has often been attributed to the increased prevalence of auto-immune disorders.

Conventionally, most treatment modalities focus on immuno-suppression or inhibition of inflammatory cycles, which mostly provides symptomatic relief and have potentially serious side effects. Recent advances in the treatment of these diseases show a shift in paradigm, by introducing more immune-tolerizing therapies such as using monoclonal antibodies, peptide analogs, etc. A combination of these therapies maybe preferred in the future, as they will help in establishing a treatment regimen which aims at achieving remission of the disease first, and then develop immune tolerance, thus ensuring that disease does not recur.



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